

Remarks:

These remarks are responsive to the Office action dated January 6, 2010. Prior to entry of this response, claims 1-14 were pending in the application. By way of this response, claims 1-4, 7, 8, 9, 10, and 14 are amended. Applicants respectfully request reconsideration of the application and allowance of the pending claims.

Formal Matters

The title is objected to for the following reason:

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Applicants have amended the title to clearly indicate the claimed subject matter. Accordingly, Applicants respectfully request the objection to the title be withdrawn.

Claims 1-5, 7, 8, 10 and 14 are objected to because of the following informalities:

Claims 1, 2, 3, 4, 5, 7, 8, 10 and 14 are objected to because of the following informalities: The abbreviations, UMTS-FDD, UMTS and WLAN, should be spelled out. Appropriate correction is required.

Applicants have amended each independent claim to spell out an initial occurrence of each abbreviation. Accordingly, Applicants respectfully request the objection to claims 1-5, 7, 8, 10, and 14 be withdrawn.

Claims 7, 8, and 9 are objected to for the following reason:

Claims 7, 8 and 9 recite "UMTS signals comprise Internet data" and "UMTS signals comprise voice data", and "voice data comprise voice messages and fax messages", respectively. However, Claims 7, 8 and 9 do not limit the claims they depend on as the limitations recited are non-functional descriptive materials, which do not change the nature of the data outputted from the device in Claim 1, and therefore the recited limitations in Claims 7, 8 and 9 are only representations of the same limitations in Claim 1. The examiner has construed "Internet data", "voice data", "voice messages" and "fax messages" as signals outputted from the device in Claim 1.

Applicants respectfully disagree with the objection to claims 7-9. Specifically, Applicants submit that the voice data, voice messages, and fax messages are not merely non-functional descriptive material. Rather, they are different data types that have different formats/protocols that are encoded and transmitted in a different structural format. Accordingly, the output of the claimed device changes based on the type of data/message that is being transmitted. For example, one data/message format may be larger than another data/message format. As such, the output signal may be transmitted by the claimed device for a longer or shorter period due to the size of the data/message. The different types of data/messages clearly change the output of the claimed device, and thus are not merely non-functional descriptive material. Therefore, Applicants respectfully request the objection to claims 7-9 be withdrawn.

Rejections under 35 U.S.C. § 112

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

The Office action asserts that despite the recitation of the claim language “means for converting” in the specification, there is no disclosure of structure, material, or act for performing the claimed function in either the specification or the claims. Applicants have amended the claims to replace the “means for converting” language with the limitation “wherein the device converts the UMTS signals received.” Support for the amendment can be found at least at page 3, lines 5-9 of the specification. Accordingly, Applicants respectfully submit that the claims comply with Section 112. Therefore, Applicants respectfully request the rejection of claims 1-14 be withdrawn.

Rejections under 35 U.S.C. § 102

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 7,050,800 (Shaheen et al., hereinafter Shaheen).

Applicants traverse the rejection of claim 1. Nevertheless to further prosecution of the subject application, Applicants have amended claim 1 to recite:

A device for converting Universal Mobile Telecommunication System – Frequency Division Duplexing (UMTS-FDD) signals into Wireless Local Area Network (WLAN) signals, comprising:

a receiver unit for receiving the UMTS-FDD signals, wherein the device converts the UMTS signals received into the WLAN signals; and means for providing or transmitting the WLAN signals;

wherein the device is installed at a point in a building where the UMTS-FDD signals cannot provide suitable UMTS-FDD signal coverage to an interior region of the building, and wherein at said point the UMTS-FDD signals are received by the device, and from said point the device transmits the WLAN signals to provide the interior region of the building with WLAN signal coverage.

In some cases, a building does not have any type of network established within the building and therefore must rely on outside signal coverage (e.g., UMTS-FDD) for communication. Moreover, due to various traits (e.g., size, building material, location, etc.), the building may include “dead zones” where not enough signal coverage is provided from outside for an apparatus (e.g., mobile phone, notebook, etc.) in the dead zone to establish communication, which causes deep indoor problems in the building. In other words, the building may include interior regions that cannot be provided with signal coverage from outside signals that are suitable for apparatus communication.

The device of claim 1 is installed at a point in such a building where signal coverage from outside exists, such as near a window or door, so that the device receives UMTS-FDD signals. Further, the device converts the UMTS-FDD signals to WLAN signals and transmits the WLAN signals to provide WLAN signal coverage to the interior region of the building that does not receive suitable UMTS-FDD signal coverage. Accordingly, the device of claim 1 directly provides WLAN signal coverage to a region of a building that would otherwise not be provided with any type of signal coverage. Moreover, the device of claim 1 provides WLAN signal coverage without any other aids (e.g., relay stations, established networks, etc.), so that even in so-called “dead zones” in the building, wherein the “deep indoor” problems exist, an apparatus (e.g., mobile phone, notebook, etc.) is provided with enough WLAN signals to enable communication.

In contrast, Shaheen does not disclose the claimed configuration. Rather, Shaheen discloses a converter 16 that merely interfaces between an established WLAN system and a UMTS by converting messages between WLAN and UMTS formats.

Unlike the claimed configuration, the converter disclosed by Shaheen is not capable of providing WLAN signals to provide suitable WLAN signal coverage to an interior region of a building as required by claim 1. Instead, Shaheen discloses a configuration where a WLAN is already established inside the building and there is no reason for the converter to provide WLAN signal coverage. Moreover, Shaheen does not explicitly disclose receiving and converting UMTS-FDD signals. Lacking the claimed features, Shaheen fails to achieve the potential benefits to solve the deep indoor signal coverage problems discussed above of the claimed configuration.

Accordingly, Shaheen does not disclose each and every element of amended claim 1. Therefore, Applicants respectfully request the rejection of claim 1 be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 2-5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaheen as applied to claim 1 above, and further in view of U.S. Patent Application Publication No. 2002/0037741 (Tjalldin et al., hereinafter Tjalldin).

As discussed above, Shaheen does not disclose each and every element of amended claim 1. Furthermore, Tjalldin does not disclose a device that is installed at a point in a building where the UMTS-FDD signals cannot provide suitable UMTS-FDD signal coverage to an interior region of the building, and wherein at said point the UMTS-FDD signals are received by the device, and from said point the device transmits the WLAN signals to provide the interior region of the building with WLAN signal coverage. Thus, even in combination Shaheen and Tjalldin do not disclose each and every element of amended claim 1. Therefore, Applicants submit amended claim 1 is in condition for allowance. Claims 2 and 5 depend from claim 1. Thus, Applicants respectfully request the rejection of claims 2 and 5 be withdrawn for at least the reasons discussed above.

Furthermore, Applicants have amended claims 3 and 10 to include features similar to amended claim 1 that are not disclosed by the combination of Shaheen and Tjalldin. Thus, even in combination Shaheen and Tjalldin do not disclose each and every element of amended claims 3 and 10. Therefore, Applicants respectfully request the rejection of claim 3 be withdrawn. Claim 4 depends from claim 3. Thus, Applicants

respectfully request the rejection of claim 4 be withdrawn for at least the reasons discussed above. Furthermore, Applicants respectfully submit that amended claim 10 is in condition for allowance. Claim 14 has been amended to depend from claim 10. Thus, Applicants respectfully request the rejection of claim 14 be withdrawn for at least the reasons discussed above.

Claims 6 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaheen and Tjalldin, as applied to claims 1 and 3 above, and further in view of U.S. Patent Application Publication No. 2003/0035471 (Pitsoulakis).

As discussed above, Shaheen and Tjalldin do not disclose each and every element of amended claim 3. Furthermore, Pitsoulakis does not disclose a device that is installed at a point in a building where the UMTS-FDD signals cannot provide suitable UMTS-FDD signal coverage to an interior region of the building, and wherein at said point the UMTS-FDD signals are received by the device, and from said point the device transmits the signals according to the telephone standard to provide the interior region of the building with telephone standard signal coverage. Thus, even in combination Shaheen, Tjalldin, and Pitsoulakis do not disclose each and every element of amended claim 3. Therefore, Applicants submit claim 3 is in condition for allowance. Claim 6 depends from claim 3. Thus, Applicants respectfully request the rejection of claim 6 be withdrawn for at least the reasons discussed above.

Furthermore, Applicants have amended claim 10 to include features similar to amended claims 1 and 3 that are not disclosed by the combination of Shaheen, Tjalldin, and Pitsoulakis. Thus, even in combination Shaheen, Tjalldin, and Pitsoulakis do not disclose each and every element of amended claim 10. Therefore, Applicants respectfully request the rejection of claim 10 be withdrawn. Claims 11-13 depend from claim 10. Thus, Applicants respectfully request the rejection of claims 11-13 be withdrawn for at least the reasons discussed above.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaheen as applied to claim 1 above, and further in view of U.S. Patent No. 6,956,846 (Lewis et al., hereinafter Lewis).

As discussed above, Shaheen does not disclose each and every element of amended claim 1. Furthermore, Lewis does not disclose a device that is installed at a point in a building where the UMTS-FDD signals cannot provide suitable UMTS-FDD signal coverage to an interior region of the building, and wherein at said point the UMTS-FDD signals are received by the device, and from said point the device transmits the WLAN signals to provide the interior region of the building with WLAN signal coverage. Thus, even in combination Shaheen and Lewis do not disclose each and every element of amended claim 1. Therefore, Applicants submit amended claim 1 is in condition for allowance. Claims 7-9 depend from claim 1. Thus, Applicants respectfully request the rejection of claims 7-9 be withdrawn for at least the reasons discussed above.

Conclusion

Applicants believe that this application is now in condition for allowance, in view of the above amendments and remarks. Accordingly, Applicants respectfully request that the Examiner issue a Notice of Allowability covering the pending claims. If the Examiner has any questions, or if a telephone interview would in any way advance prosecution of the application, please contact the undersigned attorney of record.

Please charge any cost incurred in the filing of this response, along with any other costs, to Deposit Account No. 503397.

Respectfully submitted,

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